WHAT IS CLAIMED IS:

1. A multi-beam optical scanning device comprising:

light source means which has plural luminescence parts arranged apart from each other in both a main-scanning direction and a sub-scanning direction;

a rotating polygon mirror which has reflection surfaces for deflecting plural light beams emitted from the plural luminescence parts, respectively;

a first optical system which is arranged in an optical path leading from the light source means to the rotating polygon mirror and converts the plural light beams into convergent light beams or divergent light beams; and

a third optical system which guides the plural light beams deflected by the rotating polygon mirror onto a surface to be scanned of a drum shape having a rotation axis along the main-scanning direction,

wherein, in a sub-scanning section, the respective light beams to be made incident on the surface to be scanned are made incident such that principal rays thereof form an angle with respect to a normal line of the surface to be scanned, respectively, whereby when it is assumed that a maximum value of a positional deviation amount, which is generated in a first direction relatively parallel

to the main-scanning direction between focusing points of the respective light beams on the surface to be scanned, is $\delta Y1$, a maximum value of a positional deviation amount, which is generated in a second direction relatively parallel to the main-scanning direction between the focusing points of the respective light beams on the surface to be scanned as convergent light beams or divergent light beams are made incident on the third optical system in the main scanning direction, is $\delta Y2$, and a maximum value of a positional deviation amount, which, when the light beams emitted from the plural luminescence parts have a relative wavelength difference, is generated in a third direction relatively parallel to the main-scanning direction between the focusing points of the respective light beams on the surface to be scanned due to the relative wavelength difference, is $\delta Y3$, the following conditional expression is satisfied:

$$|\delta Y1+\delta Y2+\delta Y3| \leq MAX(|\delta Y1|,|\delta Y2|,|\delta Y3|)$$

where, $MAX(|\delta Y1|,|\delta Y2|,|\delta Y3|)$ is a largest value of absolute values of $\delta Y1$, $\delta Y2$ and $\delta Y3$.

2. The multi-beam optical scanning device according to claim 1,

wherein the following conditional expression is satisfied when the positional deviation amounts

$\delta Y1$, $\delta Y2$ and $\delta Y3$ are represented by a unit of mm, respectively:

$$|\delta Y1+\delta Y2+\delta Y3| \leq 0.014 \text{ (mm)}$$

3. The multi-beam optical scanning device according to claim 1,

wherein the positional deviation amounts $\delta Y1$, $\delta Y2$ and $\delta Y3$ satisfy the following conditional expression:

$$\delta Y1 \times (\delta Y2 + \delta Y3) < 0$$

4. A multi-beam optical scanning device comprising:

light source means which has plural luminescence parts arranged apart from each other in both a main-scanning direction and a sub-scanning direction;

a rotating polygon mirror which has reflection surfaces for deflecting plural light beams emitted from the plural luminescence parts, respectively;

a first optical system which is arranged in an optical path leading from the light source means to the rotating polygon mirror and converts the plural light beams into convergent light beams or divergent light beams; and

a third optical system which guides the plural light beams deflected by the rotating polygon mirror

onto a surface to be scanned of a drum shape having a rotation axis along the main-scanning direction,

wherein, in a sub-scanning section, the respective light beams to be made incident on the surface to be scanned are made incident such that principal rays thereof form an angle with respect to a normal line of the surface to be scanned, respectively, whereby when it is assumed that a positional deviation is caused in a first direction relatively parallel to the main-scanning direction between focusing points of the respective light beams on the surface to be scanned, a positional deviation is caused in a second direction relatively parallel to the main-scanning direction between the focusing points of the respective light beams on the surface to be scanned as convergent light beams or divergent light beams are made incident on the third optical system in the main scanning direction, and, when the light beams emitted from the plural luminescence parts have a relative wavelength difference, a positional deviation is caused in a third direction relatively parallel to the main-scanning direction between the focusing points of the respective light beams on the surface to be scanned due to the relative wavelength difference, and

a number of the plural luminescence parts is N, an average value of an angle formed by the

principal rays of the plural light beams emitted from the first optical system and the optical axis of the third optical system is γ,

a focal length of the first optical system is f_{col},

an interval of the plural luminescence parts is d,

an average value of the angle which the principal rays of the plural light beams to be made incident on the surface to be scanned in the sub-scanning section forms with respect to the normal line of the surface to be scanned is β,

a radius of a circle inscribed in the rotating polygon mirror is r,

a maximum scanning angle of the plural light beams deflected and used for scanning by the rotating polygon mirror is η,

an angle formed by the normal line of the surface to be scanned in the maximum scanning position of the plural light beams, which are used for scanning the surface to be scanned by the third optical system, and the plural light beams is θ_{max},

a maximum value of the relative wavelength difference of the plural light beams emitted from the plural luminescence parts is $\delta\lambda$,

a distance from a light outgoing side principal plane of the third optical system to a natural

convergent point of the convergent light beams or the divergent light beams converted by the first optical system is Sd,

a distance from the light outgoing side principal plane of the third optical system to a position, in which the convergent light beams or the divergent light beams converted by the first optical system are converged and focused by the third optical system, is Sk;

an fθ coefficient of the third optical system is f, and

an interval of focusing points in the sub-scanning direction on the surface to be scanned of the plural light beams determined from a resolution is P,

the following conditional expression is satisfied:

[Expression 15]

$$\left| P(N-1)\sin\beta\tan\theta_{max} - \left(\frac{r\tan\frac{\eta}{2}\frac{d(N-1)}{2f_{col}}\left(\cos\left(2\arctan\frac{d(N-1)}{2f_{col}}\right)+\cos\gamma\tan\eta\right)}{\sin\left(\frac{\gamma}{2}+\frac{\eta}{2}\right)}\frac{Sk}{Sd}+9.5\delta\lambda f\right)\right| \le 0.014$$

5. The multi-beam optical scanning device according to claim 1,

wherein both the second direction and the third direction are directions opposite to the first direction.

6. The multi-beam optical scanning device according to claim 1, further comprising a second optical system which focuses the plural light beams, which have passed through the first optical system, on the reflection surfaces of the rotating polygon mirror in a linear shape extending in the main-scanning direction.

7. An image forming apparatus comprising:

the multi-beam optical scanning device according to any one of claims 1 to 6;

a photosensitive member arranged on the surface to be scanned;

a developing device which develops an electrostatic latent image, which is formed on the photosensitive member by a light beam used for scanning in the multi-beam optical scanning device, as a toner image;

a transfer device which transfers the developed toner image onto a material to have an image transferred thereon; and

a fixing device which fixes the transferred toner image to the material to have an image transferred thereon.

8. An image forming apparatus comprising:

the multi-beam optical scanning device

according to any one of claims 1 to 6; and

a printer controller which converts code data inputted from an external device into an image signal and inputs the image signal to the multi-beam optical scanning device.

9. A color image forming apparatus comprising plural image bearing members which are arranged on the surfaces to be scanned of the multi-beam optical scanning devices according to any one of claims 1 to 6, respectively, and form images of colors different from each other.

10. The color image forming apparatus according to claim 9, further comprising a printer controller which converts color signals inputted from an external device into image data of different colors and inputs the image data to the respective multi-beam optical scanning devices.